REMARKS

In response to the Official Action mailed on April 13, 2007, the application has been amended. No new matter has been added. Reconsideration of the rejections of the claims is respectfully requested in view of the above amendments and the following remarks.

In a preliminary amendment filed on August 2, 2005, the Applicants requested that the title be amended to read "Method of Interconnecting Terminals and Method of Mounting Semiconductor Devices" to ensure that the title would be the title chosen by the Applicants and not the ungrammatical title assigned to the international application by WIPO. However, as of the present time, the PAIR system continues to show an incorrect title for the present application. Therefore, in this amendment, the Applicants once again request that the title be amended.

On page 2 of the Official Action, the drawings were objected to under 37 CFR 1.83(a). This rejection is respectfully traversed.

Since the present application is the national phase of a PCT application, the drawings standards are controlled by PCT Rule 11. Since the drawings provided by the International Bureau to the PTO have already been checked without objection by the Japan Patent Office acting as a Receiving Office, the drawings are assumed to be in compliance with PCT Rule 11 and are assumed to

be acceptable. The USPTO may not impose any requirements beyond those imposed by the Patent Cooperation Treaty. See MPEP 1893.03(f). As the current objection to the drawings raised in the Official Action is not based on any irregularities under PCT Rule 11, the objection is improper and should be withdrawn.

On page 3 of the Official Action, claims 8 and 10 - 12 were rejected under 35 USC 102(b) as anticipated by Segawa et al (JP 2002-026070, referred to below as Segawa). This rejection is respectfully traversed.

Independent claim 8 as amended describes a method of interconnecting terminals including heating a resin composition disposed between terminals with the opposing terminals separated from each other by a space large enough to enable the particles to move inside the space. Similarly, independent claim 11 as amended describes a method of mounting a semiconductor device including heating a resin composition with opposing electrode pads and circuit electrodes separated from each other by a space large enough to enable the electrically conductive particles to move inside the space. Amended claims 8 and 11 are supported by page 16, lines 12 - 16 of the specification as filed, which state that during heating, particles 3b move in the resin 2b and agglomerate. Segawa does not disclose such a method.

Segawa discloses a method of manufacturing a semiconductor device in which an IC chip is joined to a wiring board by an anisotropic electrically conductive material containing electrically conductive particles. In the embodiment of Figure

3, solder bumps 3a and 3b previously formed on the electrodes of a bare chip IC 4 are connected to the electrodes of a wiring board 1 by the electrically conductive material 7. In the embodiment of Figure 6, the electrodes of a bare chip IC 24 are joined to the electrodes of a wiring board 21 by an anisotropic electrically conductive material 27 without the use of solder bumps.

In either embodiment, heating of the anisotropic electrically conductive material is performed with the bare chip IC 4 or 24 pressed tightly atop the wiring board 1 or 21 so that only a single layer of electrically conductive particles can be present between the solder bumps and the opposing electrodes or between opposing pairs of electrodes and so that the particles are immobilized. This state is clearly shown in Figures 6 and 7(e), in which the electrodes of a bare chip IC 24 are pressed against a single layer of electrically conductive particles 26a, 26b, etc.

In this state, since the electrically conductive particles are immobilized, they are unable to move inside the electrically conductive material during heating. It is possible that, upon melting, the molten material resulting from the particles may flow, but the particles themselves do not have any ability to undergo any movement as set forth in claim 8 or claim 11.

Accordingly, as Segawa does not disclose all the features of amended claims 8 or 11, it cannot anticipate these claim. Claim 8, claim 10 which depends from claim 8, claim 11, and claim 12 which depends from claim 11 are therefore allowable.

On page 6 of the Official Action, claim 9 was rejected under 35 USC 103(a) as unpatentable over Segawa in view of Ouchi et al (JP 2002-343829, referred to below as Ouchi). This rejection is respectfully traversed.

As discussed above, Segawa discloses a manufacturing method in which an IC chip is joined to a wiring board by an anisotropic electrically conductive material containing electrically conductive particles. Ouchi teaches a method of manufacturing a semiconductor device in which a semiconductor device 1 having bumps 2 formed on pads is connected to the pads 4 of a wiring board 3 by a thermosetting resin 6 applied atop the wiring board 3. The thermosetting resin 6 may contain a component with a fluxing action. According to the Official Action, it would have been obvious to have modified Segawa to employ an anisotropic electrically conductive material having reducing properties as taught by Ouchi.

Claim 9 depends from claim 8, which as described above describes a method of interconnecting terminals including heating resin disposed between terminals with opposing terminals separated from each other by a space large enough to enable the particles to move inside the space. As discussed above with respect to claim 8, Segawa does not disclose or suggest such a method, since in Segawa, electrically conductive particles between electrodes are immobilized during heating. Ouchi, which was relied upon as teaching the use of a thermosetting resin having a fluxing action, discloses nothing about the use of a resin containing electrically conductive particles. Therefore,

even if Segawa were combined with Ouchi in the manner proposed by the Official Action, the combined references would not result in a method including performing heating with opposing terminals separated from each other by a space large enough to enable the particles to move inside the space. As such, the combined references would not result in a method including all the steps set forth in claim 8 and included in claim 9 by its dependence from claim 8 and so cannot render claim 9 obvious. Claim 9 is thus allowable.

New claims 13 - 15 describe additional features of the present invention. These claims are allowable as depending from claim 8 or claim 11. Of the new claims, claim 13 reads on the embodiment shown in Figures 12(a) and 12(b). In this embodiment, prior to heating, electrically conductive particles are dispersed throughout an electrically conductive adhesive. However, after heating, substantially all of the particles collect in the region between electrodes pads 21 and lands 11, and only cured resin remains in other regions. This feature of the present invention is highly advantageous because it concentrates an electrically conductive material only in regions where it is desired to form an electrical connection, i.e., between the opposing pads 21 and lands 11 and thereby increases the electrical insulating capability of the regions where only the cured resin remains.

In light of the foregoing remarks, it is believed that the

present application is in condition for allowance. Favorable consideration is respectfully requested.

Respectfully submitted,

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